M6-MW

Semi-welded plate heat exchanger

M6-MWFG

Applications

Heating and cooling of aggressive media. Duties in refrigeration installations.

Standard design

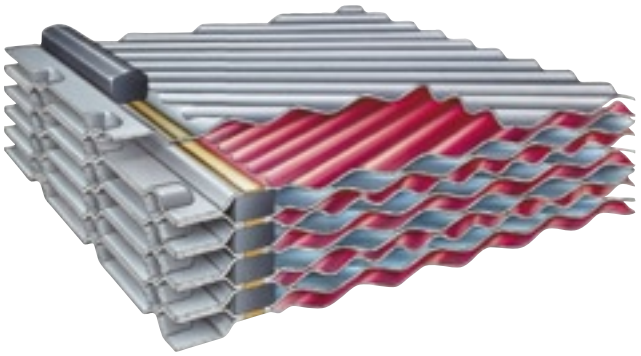
The plate heat exchanger consists of a pack of corrugated metal plates with portholes for the passage of the two fluids between which heat transfer will take place.

The plate pack is assembled between a fix frame plate and a movable pressure plate and compressed by tightening bolts. The semi-welded plates combine the flexibility and service-ability of the gasketed heat exchangers with the assurance against leakage of the welded heat exchangers. In the plate arrangement, every other channel is welded, and every other channel is gasketed. The number of plates is determined by the flow rate, physical properties of the fluids, pressure drop and temperature program. The plate corrugations promote fluid turbulence and support the plates against differential pressure.

The semi-welded plate heat exchanger is provided with gaskets specifically designed to resist aggressive media. The non-aggressive media flows in the gasketed channels. This construction means that it can easily be dismantled, for example for exchanging gaskets or for inspection and cleaning of the gasketed channels.

Corrosion-resistant plate materials, the absence of pressure retaining welds, double gasket seals, and a flexible yet vibration resistant design - to assure long life and trouble free operation.

The frame plate and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to a support column. Connections are located in the frame plate or, if either or both fluids make more than a single pass within the unit, in the frame and pressure plates.



Cross section of a semi-welded plate heat exchanger

Typical capacities

Liquid flow rate

Up to 16 kg/s, depending on media, permitted pressue drop and temperature program.

Refrigeration duties

10-70 RT/35-250 kW

Plate types

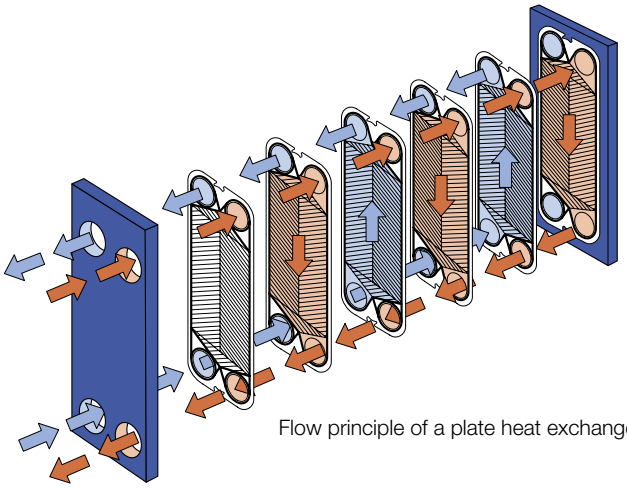
M6-MW

Frame types

FG and FD

Working principle

Channels are formed between the plates and the corner ports are arranged so that the two media flow through alternate channels. The heat is transferred through the plate between the channels, and complete counter-current flow is created for highest possible efficiency. The corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.



Flow principle of a plate heat exchanger

Standard materials

Frame plate
Mild steel, Epoxy painted

Nozzles
Carbon steel
Metal lined; Stainless steel, Titanium

Plates
Stainless steel AISI 316 or Titanium

Gaskets

Field gaskets	Nitrile, EPDM
Ring gaskets	Chloroprene, EPDM

Connections

FG	PED	Size 50 mm	DIN PN16
FG	ASME	Size 2"	ANSI 150
FD	PED	Size 50 mm	DIN PN25
FD	ASME	Size 4"	ANSI 300

Technical data

Mechanical design pressure (g) / temperature

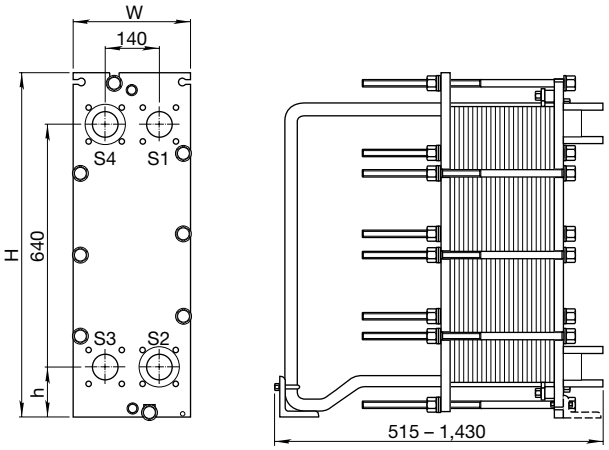
FG	PED	1.6 MPa / -40 to 180°C
FG	ASME	150 psig / -40 to 320°F
FD	PED	2.5 MPa / -40 to 180°C
FD	ASME	300 psig / -40 to 320°F

Maximum heat transfer surface
30 m² (330 sq. ft)

Particulars required for quotation

– Flow rates or heat load
– Temperature program
– Physical properties of liquids in question (if not water)
– Desired working pressure
– Maximum permitted pressure drop
– Available steam pressure

Dimensions



Measurements (mm)

Type	H	W	h
M6-FG	920	320	140
M6-FD	940	330	150

The number of tightening bolts may vary depending on pressure rating.

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M10-BW

Semi-welded plate heat exchanger

M10-BW

Applications

Heating and cooling of aggressive media. Duties in refrigeration installations.

Standard design

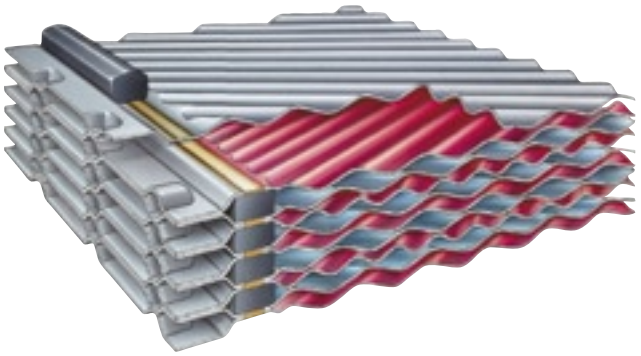
The plate heat exchanger consists of a pack of corrugated metal plates with portholes for the passage of the two fluids between which heat transfer will take place.

The plate pack is assembled between a fix frame plate and a movable pressure plate and compressed by tightening bolts. The semi-welded plates combine the flexibility and service-ability of the gasketed heat exchangers with the assurance against leakage of the welded heat exchangers. In the plate arrangement, every other channel is welded, and every other channel is gasketed. The number of plates is determined by the flow rate, physical properties of the fluids, pressure drop and temperature program. The plate corrugations promote fluid turbulence and support the plates against differential pressure.

The semi-welded plate heat exchanger is provided with gaskets specifically designed to resist aggressive media. The non-aggressive med ia flows in the gasketed channels. This construction means that it can easily be dismantled, for example for exchanging gaskets or for inspection and cleaning of the gasketed channels.

Corrosion-resistant plate materials, the absence of pressure retaining welds, double gasket seals, and a flexible yet vibration resistant design - to assure long life and trouble free operation.

The frame plate and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to a support column. Connections are located in the frame plate or, if either or both fluids make more than a single pass within the unit, in the frame and pressure plates.



Cross section of a semi-welded plate heat exchanger

Typical capacities

Liquid flow rate

Up to 50 kg/s, depending on media, permitted pressue drop and temperature program.

Refrigeration duties

50-250 RT/175-875 kW

Plate types

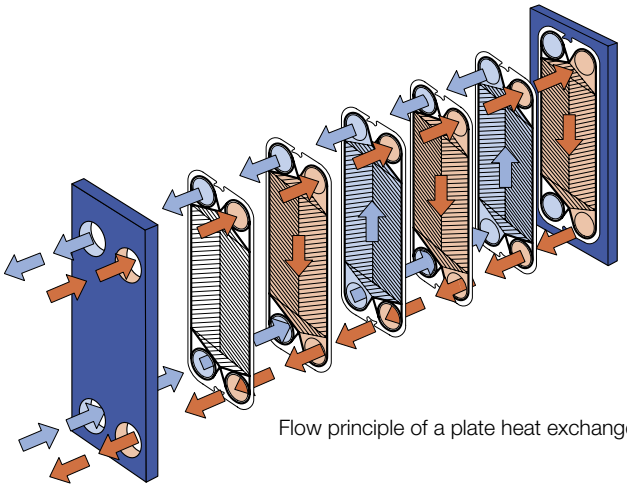
M10-BW

Frame types

FG, FD and REF

Working principle

Channels are formed between the plates and the corner ports are arranged so that the two media flow through alternate channels. The heat is transferred through the plate between the channels, and complete counter-current flow is created for highest possible efficiency. The corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.



Flow principle of a plate heat exchanger

Standard materials

Frame plate
Mild steel, Epoxy painted

Nozzles
Carbon steel
Metal lined; Stainless steel, Titanium

Plates
Stainless steel AISI 316 or Titanium

Gaskets

Field gaskets	Nitrile, EPDM
Ring gaskets	Chloroprene, EPDM

Connections

FG	PED	Size 100 mm	DIN PN16
FG	ASME	Size 4"	ANSI 150
FD	PED	Size 100 mm	DIN PN25
FD	ASME	Size 4"	ANSI 300
REF	PED	Size 100 mm	Pipe

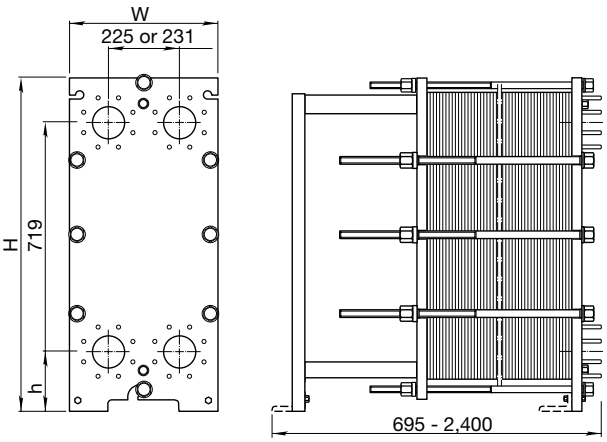
Technical data

Mechanical design pressure (g) / temperature

FG	PED	1.6 MPa / 180°C
FG	ASME	150 psig / 350°F
FD	PED	2.5 MPa / -50 to 180°C
FD	ASME	300 psig / -40 to 350°F
REF	PED	2.5 MPa / -50 to 150°C

Maximum heat transfer surface
75 m² (825 sq. ft)

Dimensions



Measurements (mm)

Type	H	W	h
M10-FG	1084	470	215
M10-FD	981	470	131
M10-FD ASME	1084	470	215
M10-BW REF	1110	470	163

The number of tightening bolts may vary depending on pressure rating.

Particulars required for quotation

– Flow rates or heat load
– Temperature program
– Physical properties of liquids in question (if not water)
– Desired working pressure
– Maximum permitted pressure drop
– Available steam pressure

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PH: 800-527-0131 FAX: 972-242-7568

MK15-BW

Semi-welded plate heat exchanger

MK15-BWFG

Applications

Heating and cooling of aggressive media. Duties in refrigeration installations.

Standard design

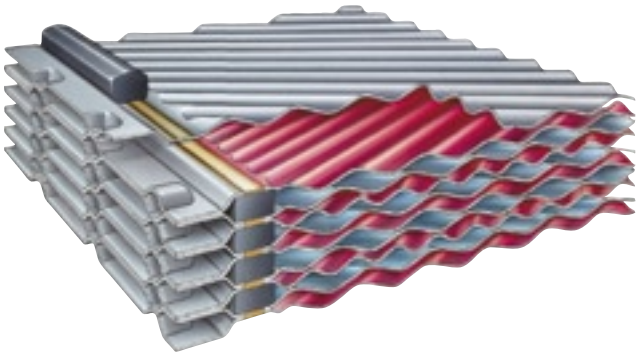
The plate heat exchanger consists of a pack of corrugated metal plates with portholes for the passage of the two fluids between which heat transfer will take place.

The plate pack is assembled between a fix frame plate and a movable pressure plate and compressed by tightening bolts. The semi-welded plates combine the flexibility and service-ability of the gasketed heat exchangers with the assurance against leakage of the welded heat exchangers. In the plate arrangement, every other channel is welded, and every other channel is gasketed. The number of plates is determined by the flow rate, physical properties of the fluids, pressure drop and temperature program. The plate corrugations promote fluid turbulence and support the plates against differential pressure.

The semi-welded plate heat exchanger is provided with gaskets specifically designed to resist aggressive media.
The non-aggressive media flows in the gasketed channels. This construction means that it can easily be dismantled, for example for exchanging gaskets or for inspection and cleaning of the gasketed channels.

Corrosion-resistant plate materials, the absence of pressure retaining welds, double gasket seals, and a flexible yet vibration resistant design - to assure long life and trouble free operation.

The frame plate and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to a support column. Connections are located in the frame plate or, if either or both fluids make more than a single pass within the unit, in the frame and pressure plates.



Cross section of a semi-welded plate heat exchanger

Typical capacities

Liquid flow rate

Up to 80 kg/s, depending on media, permitted pressue drop and temperature program.

Refrigeration

100-450 RT/350-1575 kW

Plate types

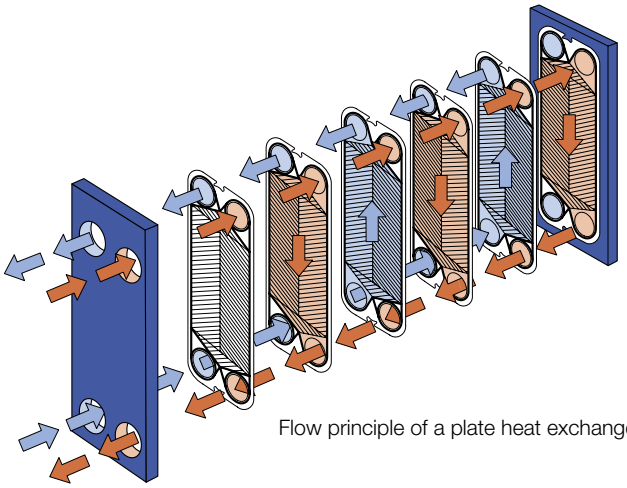
MK15-BW

Frame types

FG and FD

Working principle

Channels are formed between the plates and the corner ports are arranged so that the two media flow through alternate channels. The heat is transferred through the plate between the channels, and complete counter-current flow is created for highest possible efficiency. The corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.



Flow principle of a plate heat exchanger

Standard materials

Frame plate
Mild steel, Epoxy painted

Nozzles
Carbon steel
Metal lined; Stainless steel, Alloy 20/18/6 or Titanium

Plates
Stainless steel AISI 316, Alloy 20/18/6 or Titanium

Gaskets

Field gaskets	Nitrile, EPDM
Ring gaskets	Chloroprene, EPDM and Nitrile

Connections

FG	PED	Size 150 mm	DIN PN16
FG	ASME	Size 6"	ANSI 150
FD	PED	Size 150 mm	DIN PN25
FD	ASME	Size 6"	ANSI 300

Technical data

Mechanical design pressure (g) / temperature

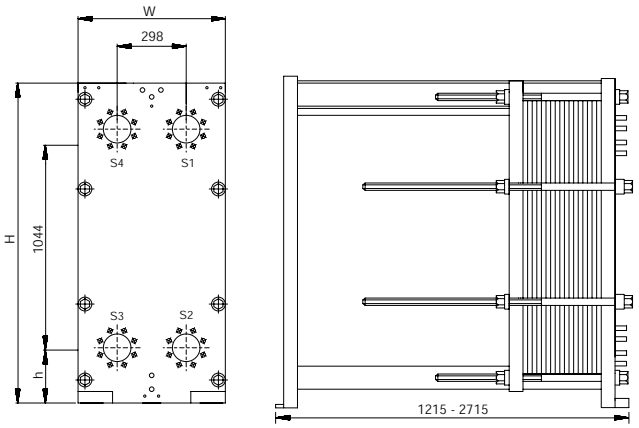
FG	PED	1.6 MPa / -50 to 180°C
FG	ASME	150 psig / -40 to 350°F
FD	PED	2.5 MPa / -50 to 180°C
FD	ASME	300 psig / -40 to 350°F

Maximum heat transfer surface
165 m² (1780 sq. ft)

Particulars required for quotation

– Flow rates or heat load
– Temperature program
– Physical properties of liquids in question (if not water)
– Desired working pressure
– Maximum permitted pressure drop
– Available steam pressure

Dimensions



Measurements (mm)

Type	H	W	h
MK15-FG	1486	650	221
MK15-FD	1486	650	221

The number of tightening bolts may vary depending on pressure rating.

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T20MW/BW

Semi welded plate heat exchanger

Applications
Semi-welded plate heat exchanger for general heating, cooling and heat recovery of aggressive media in one channel.

Standard design
The plate heat exchanger consists of a pack of corrugated metal plates with portholes for the passage of the two fluids between which heat transfer will take place.

The plate pack is assembled between a fix frame plate and a movable pressure plate and compressed by tightening bolts. The semi-welded plates combine the flexibility and serviceability of the gasketed heat exchangers with the assurance against leakage of the welded heat exchangers. In the plate arrangement, every other channel is welded, and every other channel is gasketed. The number of plates is determined by the flow rate, physical properties of the fluids, pressure drop and temperature program. The plate corrugations promote fluid turbulence and support the plates against differential pressure.

The semi-welded plate heat exchanger is provided with gaskets specifically designed to resist aggressive media. The non-aggressive media flows in the gasketed channels. This construction means that it can easily be dismantled, for example for exchanging gaskets or for inspection and cleaning of the gasketed channels.

The semi welded plate heat exchanger features corrosion-resistant plate material, absence of pressure retaining welds, double gasket seals, and a flexible yet vibration-resistant design all to assure long life and trouble free operation.

The frame plate and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to a support column.

Connections are located in the frame plate or, if either or both fluids make more than a single pass within the unit, in the frame and pressure plates.

T20MW/BW

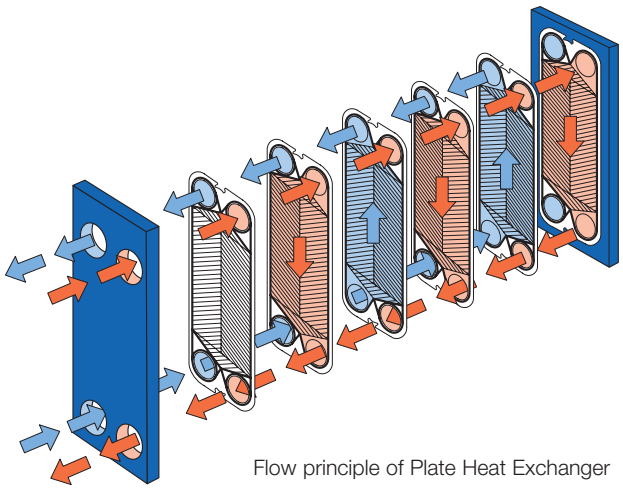
Typical capacities
Liquid flow rate
Up to 677 kg/s, depending on media, permitted pressure drop and temperature program.

Plate types
T20MW and T20BW plates

Frame types
FG and FS

Working principle

Channels are formed between the plates and the corner ports are arranged so that the two media flow through alternate channels. The heat is transferred through the plate between the channels, and complete counter-current flow is created for highest possible efficiency. The corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.



Flow principle of Plate Heat Exchanger

STANDARD MATERIALS

Frame plate

Mild steel, Epoxy painted

Nozzles

Carbon steel
Metal lined: Stainless steel, Titanium

Plates

Stainless steel AISI 316 or Titanium

Gaskets

Field gaskets	Nitrile, EPDM
Ring gaskets	Chloroprene, EPDM

Connections

FG PED	Size 200 mm	DIN PN10/16
FG ASME	Size 8”	ASME Cl. 100/150
FS PED	Size 200 mm	DIN PN25/40
FS ASME	Size 8”	ASME Cl. 300/400

TECHNICAL DATA

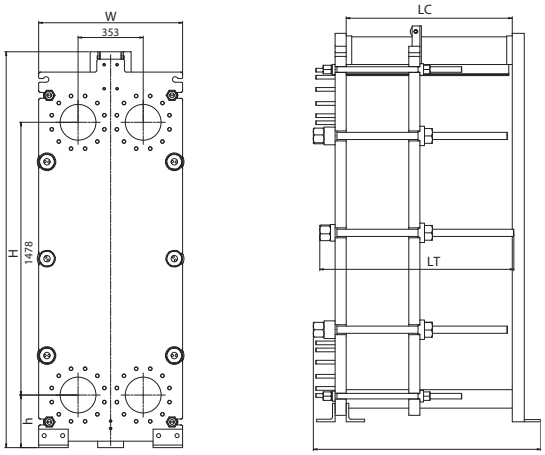
Mechanical design pressure (g) / temperature

FG PED	1.6 MPa / 180 °C
FG ASME	150 psig / 350 °F
FS PED	3.0 MPa / 160 °C
FS ASME	400 psig / 320 °F

Maximum heat transfer surface

425 m² (4,550 sq. ft)

Dimensions



Measurements (mm)

Type	H	W	h
T20-MWFG	2145	780	285

Particulars required for quotation

- Flow rates or heat load
- Temperature program
- Physical properties of liquids in question (if not water)
- Desired working pressure
- Maximum permitted pressure drop
- Available steam pressure

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PH: 800-527-0131 FAX: 972-242-7568

MA30 W

Semi welded plate heat exchanger

Applications
Semi-welded plate heat exchanger for general heating, cooling and heat recovery of aggressive media in one channel.

Standard design
The plate heat exchanger consists of a pack of corrugated metal plates with portholes for the passage of the two fluids between which heat transfer will take place.

The plate heat exchanger consists of a pack of corrugated metal plates with portholes for the passage of the two fluids between which heat transfer will take place.

The plate pack is assembled between a fix frame plate and a movable pressure plate and compressed by tightening bolts. The semi-welded plates combine the flexibility and serviceability of the gasketed heat exchangers with the assurance against leakage of the welded heat exchangers. In the plate arrangement, every other channel is welded, and every other channel is gasketed. The number of plates is determined by the flow rate, physical properties of the fluids, pressure drop and temperature program. The plate corrugations promote fluid turbulence and support the plates against differential pressure.

The semi-welded plate heat exchanger is provided with gaskets specifically designed to resist aggressive media. The non-aggressive media flows in the gasketed channels. This construction means that it can easily be dismantled, for example for exchanging gaskets or for inspection and cleaning of the gasketed channels.

Corrosion-resistant plate materials, the absence of pressure retaining welds, double gasket seals, and a flexible yet vibration-resistant design - to assure long life and trouble free operation.

The frame plate and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to a support column.

Connections are located in the frame plate or, if either or both fluids make more than a single pass within the unit, in the frame and pressure plates.

MA30-WFG

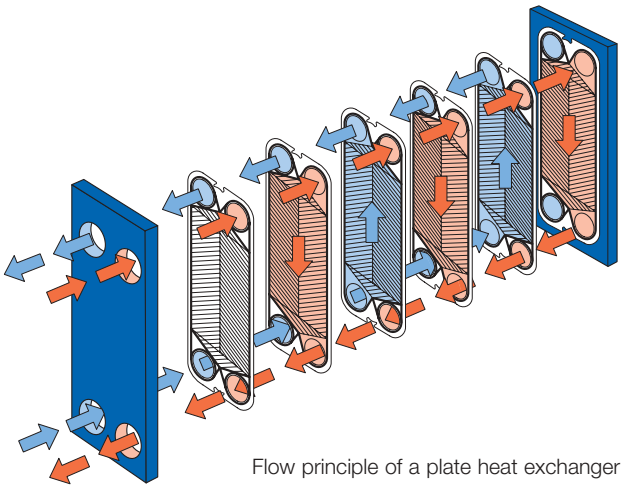
Typical capacities
Liquid flow rate
Up to 361 kg/s, depending on media, permitted pressure drop and temperature program.

Plate types
MA30W plates

Frame types
FG, FD and FS

Working principle

Channels are formed between the plates and the corner ports are arranged so that the two media flow through alternate channels. The heat is transferred through the plate between the channels, and complete counter-current flow is created for highest possible efficiency. The corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.



Flow principle of a plate heat exchanger

STANDARD MATERIALS

Frame plate

Mild steel, Epoxy painted

Nozzles

Carbon steel
Metal lined: Stainless steel, Titanium

Plates

Stainless steel AISI 316 or Titanium

Gaskets

Field gaskets	Nitrile, EPDM
Ring gaskets	Chloroprene, EPDM

Connections

FG	PED	Size 300/350 mm	DIN 2501 PN16
FG	ASME	Size 12”/14”	ANSI 150
FD	PED	Size 300/350 mm	DIN 2501 PN25
FD	ASME	Size 12”/14”	ANSI 300
FS	PED	Size 300/350 mm	DIN 2501 PN25/PN40
FS	ASME	Size 12”/14"	ANSI 400

TECHNICAL DATA

Mechanical design pressure (g) / temperature

FG	PED	1.6 MPa / 180 °C
FG	ASME	150 psig / 350 °F
FD	PED	2.5 MPa / 180 °C
FD	ASME	300 psig / 350 °F
FS	PED	3.0 MPa / 160 °C
FS	ASME	400 psig / 320 °F

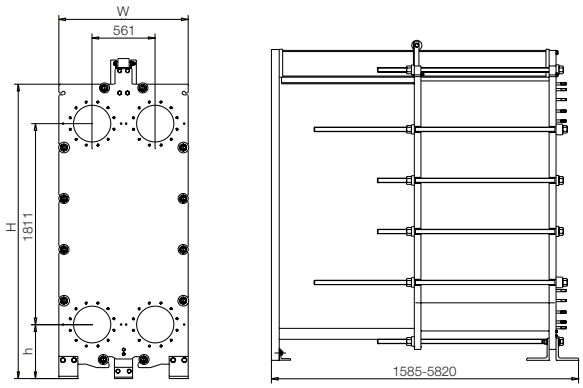
Maximum heat transfer surface

1131 m^2 (12.107 sq. ft)

Particulars required for quotation

– Flow rates or heat load
– Temperature program
– Physical properties of liquids in question (if not water)
– Desired working pressure
– Maximum permitted pressure drop
– Available steam pressure

Dimensions



Measurements (mm)

Type	H	W	h
MA30-WFG	2940	1170	521
MA30-WFD	2940	1170	521
MA30-WFS	2940	1170	521

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